AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions and listings of claims in the application:

1. (Currently Amended) A separating material formed by a process comprising the steps of:

providing a solid substrate having a substrate surface, wherein ~~amino-functional groups~~ primary or secondary amines are coupled to the substrate surface;

covalently coupling the ~~amino-functional groups~~ primary or secondary amines with a thermally labile radical initiator; and

contacting the substrate surface with a solution of polymerizable monomers,

wherein thermally initiated graft copolymerization of the monomers forms a structure of adjacent functional polymer chains on the substrate surface,

and wherein the graft copolymerization does not require the use of an organic solvent.

2. (Previously Presented) A separating material according to claim 1, wherein the solid substrate is a porous polymeric material having a pore size sufficiently large to allow passage of blood, blood plasma, or blood serum through the solid substrate.

3. (Previously Presented) A separating material according to one of claims 1 and 2, wherein the solid substrate is selected from the group consisting of: a membrane, a particle bed, a fibre mat, and beads.

4. (Previously Presented) A separating material according to claim 1, wherein the solid substrate includes a biocompatible material.

5. (Previously Presented) A separating material according to claim 1, wherein the solid substrate is made of a material selected from a group of compounds including:

polyacrylates, polystyrene, polyethylene oxide, cellulose, cellulose derivatives, polyethersulfone (PES), polypropylene (PP), polysulfone (PSU), polymethylmethacrylate (PMMA), polycarbonate (PC), polyacrylonitrile (PAN), polyamide (PA), polytetrafluorethylene (PTFE), cellulose acetate (CA), and regenerated cellulose.

6. (Previously Presented) A separating material according to claim 1, wherein the amino-functional groups are primary amino groups.

7. (Previously Presented) A separating material according to 1, wherein the thermally labile radical initiator comprises at least one carboxylic group.

8. (Previously Presented) A separating material according to claim 1, wherein the thermally labile radical initiator includes compounds which decompose to give free radicals upon thermal activation.

9. (Previously Presented) A separating material according to claim 1, wherein the thermally labile radical initiator is 4,4'-azobis-(4-cyanovaleric acid) or 2,2'-azobis-[N-(2-carboxyethyl)-2-methylpropionamidine.

10. (Previously Presented) A separating material according to claim 1, wherein the polymerizable monomers are selected from compounds having a polymerizable double bond.

11. (Previously Presented) A separating material according to claim 1, wherein the polymerizable monomers are selected from the group consisting of:

acrylic acid, methacrylic acid, vinyl compounds, derivatives of acrylic acid, methacrylic acid and vinyl compounds, N,N-Dimethylaminoethyl acrylamide, N,N-Diethylaminoethyl acrylamide, N,N-Dimethylaminopropyl acrylamide (DMPA), N,N-Dimethylaminopropyl methacrylamide, N,N-Dimethylaminoethyl methacrylate, N,N-Diethylaminoethyl methacrylate, N,N-Dimethylaminoethyl acrylate, N-Morpholinoethyl acrylate, N-Morpholinoethyl methacrylate, 1-Vinylimidazole, Trimethylammoniumethyl acrylamide, Trimethylammoniumpropyl methacrylamide, Trimethylammoniumethyl methacrylate, Glycidyl acrylate, Glycidyl methacrylate, Vinyl glycidyl ether, Vinyl glycidyl urethane, 2-Hydroxyethyl methacrylate, 2-Hydroxypropyl methacrylate, Hydroxymethyl methacrylate, N-Vinylpyrrolidone, 2-Vinyl pyridine, 4-Vinyl pyridine, and N-Vinyl-2-methylimidazole.

12. (Previously Presented) A separating material according to claim 1, wherein the polymerizable monomers comprise Dimethylaminopropyl acrylamide (DMPA).

13. (Previously Presented) A separating material according to claim 1, wherein the polymerizable monomers are selected from compounds of the following formula:

$H_2C=C(R^1)-C(O)-X-R^2-N(R^3)_2$,

wherein R^1 = hydrogen, methyl or ethyl group; R^2 = C1-C6-alkyl or aryl group; R^3 = methyl or ethyl group; and X = NH or O.

14. (Currently Amended) A method for producing a separating material comprising the steps of:

providing a solid substrate having a substrate surface, wherein ~~amino-functional groups~~ primary or secondary amines are coupled to the substrate surface;

covalently coupling the ~~amino-functional groups~~ primary or secondary amines with a thermally labile radical initiator; and

contacting the substrate surface with a solution of polymerizable monomers,

wherein thermally initiated graft copolymerization of the monomers forms a structure including adjacent functional polymer chains on the substrate surface, and wherein the graft copolymerization does not require the use of an organic solvent.

15. (Previously Presented) A method according to claim 14, wherein the solid substrate is a porous polymeric material having a pore size sufficiently large to allow passage of blood, blood plasma, or blood serum through the solid substrate.

16. (Previously Presented) A method according to claim 14, wherein the solid substrate is selected from the group consisting of: a membrane, a particle bed, a fibre mat, and beads.

17. (Previously Presented) A method according to claim 14, wherein the solid substrate includes a biocompatible material.

18 (Previously Presented) A method according to claim 14, wherein the solid substrate is made of a material selected from a group of compounds including:

polyacrylates, polystyrene, polyethylene oxide, cellulose, cellulose derivatives, polyethersulfone (PES), polypropylene (PP), polysulfone (PSU), polymethylmethacrylate (PMMA), polycarbonate (PC), polyacrylonitrile (PAN), polyamide (PA), polytetrafluorethylene (PTFE), cellulose acetate (CA), and regenerated cellulose.

19. (Previously Presented) A method according to claim 14, wherein the amino-functional groups are primary amino groups.

20. (Previously Presented) A method according to claim 14, wherein the thermally labile radical initiator comprises at least one carboxylic group.

21. (Previously Presented) A method according to claim 14, wherein the thermally labile radical initiator includes compounds which decompose to give free radicals upon thermal activation.

22. (Previously Presented) A method according to claim 14, wherein the thermally labile radical initiator is 4,4'-azobis-(4-cyanovaleric acid) or 2,2'-azobis-[N-(2-carboxyethyl)-2-methylpropionamide.

23. (Previously Presented) A method according to claim 14, wherein the polymerizable monomers are selected from compounds having a polymerizable double bond.

24. (Previously Presented) A method according to claim 14, wherein the polymerizable monomers are selected from the group consisting of:

acrylic acid, methacrylic acid, vinyl compounds, derivatives of acrylic acid, methacrylic acid and vinyl compounds, N,N-Dimethylaminoethyl acrylamide, N,N-Diethylaminoethyl acrylamide, N,N-Dimethylaminopropyl acrylamide (DMPA), N,N-

Dimethylaminopropyl methacrylamide, N,N-Dimethylaminoethyl methacrylate, N,N-Diethylaminoethyl methacrylate, N,N-Dimethylaminoethyl acrylate, N-Morpholinoethyl acrylate, N-Morpholinoethyl methacrylate, 1-Vinylimidazole, Trimethylammoniumethyl acrylamide, Trimethylammoniumpropyl methacrylamide, Trimethylammoniumethyl methacrylate, Glycidyl acrylate, Glycidyl methacrylate, Vinyl glycidyl ether, Vinyl glycidyl urethane, 2-Hydroxyethyl methacrylate, 2-Hydroxypropyl methacrylate, Hydroxymethyl methacrylate, N-Vinylpyrrolidone, 2-Vinyl pyridine, 4-Vinyl pyridine, and N-Vinyl-2-methylimidazole.

25. (Previously Presented) A method according to claim 14, wherein the polymerizable monomers comprise Dimethylaminopropyl acrylamide (DMPA).

26. (Previously Presented) A method according to claim 14, wherein the polymerizable monomers are selected from compounds of the following formula:

$H_2C=C(R^1)-C(O)-X-R^2-N(R^3)_2$,

wherein R^1 = hydrogen, methyl or ethyl group; R^2 = alkyl or aryl group; R^3 = methyl or ethyl group; and X= NH or O.

27. (Previously Presented) A use of a separating material of claim 1 for the extracorporeal treatment of blood, blood plasma or blood serum.

28. (Previously Presented) A use in accordance with claim 27, wherein the use is for the extracorporeal removal of endotoxins from blood, plasma or serum of septic patients.

29. (Previously Presented) A use of a separating material of claim 1, wherein the use is for affinity adsorption, ion-exchange adsorption, hydrophobic adsorption, hydrophilic adsorption, or affinity adsorption applications.

30. (Previously Presented) A separating column comprising the separating material of claim 1, whereby the separating material includes beads, said beads being packed into the separating column, and the beads having a size sufficient to provide a porosity allowing passage of blood cells through the separating column.

31. (Previously Presented) A separating cartridge, comprising: a tube; and multiple hollow fibre membranes potted into the tube, said tube being fitted with ports, and the hollow fibre membranes having a pore size sufficient to allow passage of blood plasma through the hollow fibre membranes, wherein the hollow fibre membranes include the separating material of claim 1.

32. (Previously Presented) A separating material according the claim 3, wherein the solid substrate is a membrane, said membrane comprising a hollow fibre.

33. (Previously Presented) A separating material according to claim 5, wherein the solid substrate includes blends or copolymers of said compounds.

34. (Previously Presented) A separating material according to claim 33, wherein the blends or copolymers of said compounds further comprise hydrophilizing polymers, polyvinylpyrollidone (PVP), or polyethyleneoxide (PEO).

35. (Previously Presented) A separating material according to claim 8, wherein the thermally labile radical indicator comprises an azo compound or a peroxide.

36. (Previously Presented) A method according to claim 16, wherein the solid substrate is a membrane, said membrane comprising a hollow fibre.

37. (Previously Presented) A method according to claim 18, wherein the solid substrate includes blends or copolymers of said compounds.

38. (Previously Presented) A method according to claim 37, wherein the blends or copolymers of said compounds further comprise hydrophilizing polymers, polyvinylpyrollidone (PVP), or polyethyleneoxide (PEO).

39. (Previously Presented) A method according to claim 21, wherein the thermally labile radical indicator comprises an azo compound or a peroxide.